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L Number	Hits	Search Text	DB	Time stamp
76	177	((primary near3 coil) same (transducer or vibrator or vibration or piezoelectric or (piezo adj electric))) same ((secondary near3 coil) same (transducer or vibrator or vibration or piezoelectric or (piezo adj electric)))	EPO; JPO; DERWENT; IBM_TDB	2003/06/07 13:43
-	254095	vibrat\$8	USPAT; US-PGPUB	2003/05/12 10:47
-	488883	magnet\$8	USPAT; US-PGPUB	2003/05/12 10:48
-	12640	primary near3 coil	USPAT; US-PGPUB	2003/06/07 12:48
-	11631	secondary near3 coil	USPAT; US-PGPUB	2003/05/12 11:00
-	6554	(primary near3 coil) with (secondary near3 coil)	USPAT; US-PGPUB	2003/05/12 11:00
-	1612	magnet\$8 with ((primary near3 coil) with (secondary near3 coil))	USPAT; US-PGPUB	2003/05/12 11:00
-	26	vibrat\$8 same (magnet\$8 with ((primary near3 coil) with (secondary near3 coil)))	USPAT; US-PGPUB	2003/05/12 11:29
-	24537	(contact or stylus) with vibrat\$8	USPAT; US-PGPUB	2003/05/12 11:09
-	6	((contact or stylus) with vibrat\$8) same ((primary near3 coil) with (secondary near3 coil)) or ((touch with vibrat\$8) same ((primary near3 coil) with (secondary near3 coil)))	USPAT; US-PGPUB	2003/05/12 11:29
-	1784	((contact or stylus) with vibrat\$8) same magnet\$8) or ((touch with vibrat\$8) same magnet\$8)	USPAT; US-PGPUB	2003/05/12 11:11
-	516	((contact or stylus or touch) with vibrat\$8) same magnet\$8) same coil	USPAT; US-PGPUB	2003/05/12 11:29
-	18758	(contact or stylus or touch).ti.	USPAT; US-PGPUB	2003/05/12 11:24
-	44	(vibrat\$8 or resonan\$6).ti. and ((contact or stylus or touch).ti.)	USPAT; US-PGPUB	2003/05/12 11:30
-	24	vibrat\$8 same (magnet\$8 with ((primary near3 coil) with (secondary near3 coil)))	EPO; JPO; DERWENT; IBM_TDB	2003/05/12 11:29
-	6	((contact or stylus) with vibrat\$8) same ((primary near3 coil) with (secondary near3 coil)) or ((touch with vibrat\$8) same ((primary near3 coil) with (secondary near3 coil)))	EPO; JPO; DERWENT; IBM_TDB	2003/05/12 11:29
-	273	((contact or stylus or touch) with vibrat\$8) same magnet\$8) same coil	EPO; JPO; DERWENT; IBM_TDB	2003/05/12 11:30
-	2858	(vibrat\$8 or resonan\$6).ti. and ((contact or stylus or touch).ti.)	EPO; JPO; DERWENT; IBM_TDB	2003/05/12 11:31
-	1277	20001121.ad.	JPO	2003/06/07 12:13
-	2	20001121.ad. and matsuki.in.	JPO	2003/06/07 12:15
-	1	20001121.ad. and hidaka.in.	JPO	2003/06/07 12:17
-	0	JP02002165219A.pn.	DERWENT	2003/06/07 12:17
-	1	2002156219\$.pn.	DERWENT	2003/06/07 12:17
-	1	2002-486158.NRAN.	DERWENT	2003/06/07 12:18
-	624	(primary near3 coil) same (transducer or vibrator or vibration or piezoelectric or (piezo adj electric))	USPAT; US-PGPUB	2003/06/07 12:49
-	538	(secondary near3 coil) same (transducer or vibrator or vibration or piezoelectric or (piezo adj electric))	USPAT; US-PGPUB	2003/06/07 12:49
-	374	((primary near3 coil) same (transducer or vibrator or vibration or piezoelectric or (piezo adj electric))) same ((secondary near3 coil) same (transducer or vibrator or vibration or piezoelectric or (piezo adj electric)))	USPAT; US-PGPUB	2003/06/07 13:43
-	0	5663504.URPN.	USPAT	2003/06/07 13:17

**PAT-NO:** JP02002243538A

**DOCUMENT-  
IDENTIFIER:** JP 2002243538 A

**TITLE:** VIBRATION  
DETECTION SYSTEM  
OF ELASTIC  
MATERIAL

**PUBN-DATE:** August 28, 2002

**INVENTOR-INFORMATION:**

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OKAMOTO, KIYOKAZUN	A
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**APPL-NO:** JP2001037408

**APPL-DATE:** February 14, 2001

**INT-CL** G01H011/02 ,  
**(IPC)** : G01B007/00 ,  
          G01B021/00 ,  
          G01H009/00 ,  
          G01H011/04

## **ABSTRACT:**

PROBLEM TO BE SOLVED: To provide a vibration detection system of an elastic material capable of acquiring a detection signal having an improved S/N ratio, and grasping

vibration of the elastic material highly accurately, and having a simple and inexpensive constitution.

SOLUTION: In this vibration detection system, a detection signal from a detection means 23 for detecting the vibration state of a stylus 21 is received by a primary coil 31 of a magnetic circuit 30, and the vibration of the stylus 21 is detected by using an output signal generated from a secondary coil 32 by mutual induction. Even when the stylus 21 is excited in a

main vibration mode and vibration in multiplex vibration modes including a high-frequency component is generated in the stylus 21 by the mass of the stylus 21 or the like, the high-frequency component is hardly reflected to the output signal from the secondary coil 32, because the coil has such a property that a high-frequency current hardly flows therein. Therefore, the output signal to which vibration behavior in the main vibration mode is reflected highly accurately can be acquired, and the

vibration state of the  
stylus 21 can be grasped  
highly accurately by  
observing the output  
signal.

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